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17.12.2001

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Patent Claims

1. A power assisted steering system for vehicles, in particular passenger cars, having a pump which feeds to a hydraulic servo actuator and a three-way flow regulator valve which is located at the junction between the pump and the servo actuator, which has a measuring throttle in the inflow to the servo actuator and an outflow throttle which is located in the bypass of the latter and via which the excess flow of the pump is branched off and its variable throttle cross section is determined by means of a piston as a pressure compensator which - with respect to the volume flow which passes via the measuring throttle - is charged by connection to the inflow side and, in the opposite direction thereto, by connection to the outflow side and by an actuating element which has an actuating path which is dependent on the actuating force and opposing force, characterized in that a fixed throttle is provided as measuring throttle (12) and in that the actuating element (16) has actively variable actuating force with the effect of varying the volume flow.
2. The power assisted steering system as claimed in claim 1, characterized in that the actuating element (16) comprises an actuating member (18) which can be adjusted as a function of the current applied.
3. The power assisted steering system as claimed in claim 2, characterized in that a force actuator is provided as the actuating member (18) which can be adjusted as a function of the current applied.

4. The power assisted steering system as claimed in claim 2, characterized in that a flow-dividing actuator is provided as actuator member (18) which can be adjusted as a function of the current applied.

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5. The power assisted steering system as claimed in claim 2 or 3, characterized in that the actuator member (18) is formed by a magnet actuator.

10 6. The power assisted steering system as claimed in claim 4, characterized in that the actuator member (18) is formed by a spindle actuator.

15 7. The power assisted steering system as claimed in one of the preceding claims, characterized in that the actuator element (16) comprises an elastic actuator member (17).

20 8. The power assisted steering system as claimed in claim 7, characterized in that the elastic actuator member (17) is formed by a spring.

25 9. The power assisted steering system as claimed in one of the preceding claims, characterized in that the actuator members (17, 18) of the actuator element (16) are arranged in a parallel connection to the piston (11).

30 10. The power assisted steering system as claimed in one of claims 1 to 9, characterized in that the actuator members (17, 18) of the actuator element (16) are arranged in a series connection to the piston (11).

35 11. The power assisted steering system as claimed in claim 9, characterized in that, when there is a parallel connection of the actuator members (17, 18), they are formed by a force actuator and a spring.

12. The power assisted steering system as claimed in

claim 10, characterized in that, when there is a series connection of the actuator members (17, 18), these are formed by a flow-dividing actuator and a spring.

5 13. The power assisted steering system as claimed in one of the preceding claims, characterized in that the servopump is embodied as a constant delivery pump (2).

10 14. The power assisted steering system as claimed in one of claims 1 to 12, characterized in that the servopump is embodied as an adjustable pump (20).

15 15. The power assisted steering system as claimed in claim 14, characterized in that the adjustable pump (20) is actuated by means of the outflow throttle (24) which is embodied as a pressure compensator.

20 16. The power assisted steering system as claimed in claim 15, characterized in that the adjustable pump (20) is spring-loaded to an outlet position which corresponds to an equilibrium position of the pressure compensator (outflow throttle 24) and can be set, in accordance with the adjustment of the pressure compensator (outflow throttle 24), to a working position which corresponds to the respectively required 25 volume flow Q_{setp} and is assigned to an equilibrium position of the pressure compensator (outflow throttle 24).